

LINEAR ALGEBRA and Its Applications

Volume 10, 1975



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by **SERGIU RUDEANU**, Institutul Matematica, Bucharest, Romania.

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Whereas the set-theoretical aspect of Boolean algebras is the theme of several monographs, Part I (Chapters 1-14) of this book covers for the first time, the algebraic aspect, understood as the theory of functions and equations in an arbitrary Boolean algebra. A systematic presentation of the field as well as more generality are obtained by making the distinction between Boolean functions (built up from variables and constants by superpositions of the basic operations) and simple Boolean functions (involving no constants). Topics dealt with include fundamental theorems about Boolean functions and equations, orthonormality, symmetry, Boolean ring equations and uniqueness, Boolean transformations, parametric equations, inequalities and syllogisms, injectivity and monotonicity algebraic structures in a Boolean algebra, Boolean analogues of linear algebra, arithmetic, geometry and calculus.

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